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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/826,171	04/05/2001	Hideki Matsumoto	684.3210	7813

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EXAMINER

LEE, SUSAN SHUK YIN

ART UNIT	PAPER NUMBER
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2852

DATE MAILED: 06/19/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/826,171

Applicant(s)

MATSUMOTO ET AL.

Examiner

Susan S. Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-82 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13 is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-12, 15-74 and 77-82 is/are rejected.
- 7) ☒ Claim(s) 4, 5, 14, 75 and 76 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 April 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the length of the first electrode measured in a direction crossing with a longitudinal direction of the developing member is longer than the second electrode (claims 4, 25, 47, 70, 74, and 81) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

The abstract of the disclosure is objected to because it is too lengthy. Correction is required. See MPEP § 608.01(b).

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 3, 6-11, 15, 16, 17/15, 17/16, 18/15, 18/16, 19/13, 19/15, 19/16, 20/15, 20/16/15, 21-42, 44, 45/44, 46/43, 46/44, 47/44, 48/44, 49, 50, 51/49, 51/50, 52/49, 52/50, 53/49, 53/50, 54/49, 54/50, 55/44, 56-71, 74, 77, and 79-82 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claim 3, lines 2-3, "said developing device frame" lacks antecedent basis.

As to claim 6, line 19, "send developing member" is awkward language.

As to claim 15, lines 2, "said second electrode said second electrode" is redundant.

As to claim 19, line 2, "comprising and intermediary electrode" is awkward language.

As to claim 22, line 6, "the electrostatic latent image" lacks antecedent basis.

As to claim 24, line 3, "said developing device frame" lacks antecedent basis.

As to claim 27, line 6, "the electrostatic latent image" lacks antecedent basis.

As to claim 29, line 3, "said developing device" lacks antecedent basis.

As to claim 33, line 6, "the electrostatic latent image" lacks antecedent basis.

As to claim 34, line 6, "the electrostatic latent image" lacks antecedent basis.

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As to claim 34, line 14, "said developer accommodating portion" lacks antecedent basis.

As to claim 36, line 2, "said second electrode said second electrode" is redundant.

As to claim 38/33, line 2, "said first electrode and said second electrode" lack antecedent basis.

As to claim 39/33, line 2, "said first electrode" and "said second electrode" lack antecedent basis.

As to claim 44, line 13, "said developing device" lacks antecedent basis.

As to claim 44, lines 13-14, "the main assembly" lacks antecedent basis.

As to claim 46, lines 2-3, "said developing device frame" lacks antecedent basis.

As to claim 49, lines 13-14, "the main assembly" lacks antecedent basis.

As to claim 49, line 22, "send developing member" is awkward language.

As to claim 50, line 9, "the electrostatic latent image" lacks antecedent basis.

As to claim 50, line 13, "said developing device" lacks antecedent basis.

As to claim 50, line 21, "send developing member" is awkward language.

As to claim 50, line 33, "said third electric" lacks antecedent basis. It should be -
- said third electrical - -.

As to claim 56, line 18, "the main assembly" lacks antecedent basis.

As to claim 57, lines 14-15, "the main assembly" lacks antecedent basis.

As to claim 57, line 17, "said developer accommodating portion" lacks antecedent basis.

As to claim 57, line 23, "a second electric" should be - - a second electrical - -.

As to claim 58, line 9, "the electrostatic latent image" lacks antecedent basis.

As to claim 59, line 9, "the electrostatic latent image" lacks antecedent basis.

As to claim 59, line 14, "said developing device" lacks antecedent basis.

As to claim 59, line 17, "said developing accommodating portion" lacks antecedent basis.

As to claim 59, line 23, "a second electric" should be - - a second electrical - -.

As to claim 59, line 33, "b) electrostatic latent image forming means" is unclear since there is a previous "b)" paragraph on line 6 of the same claim.

As to claim 59, line 36, "said third electric" should be - - said third electrical - -.

As to claims 61/56 and 61/58, line 2, "third electrode" is not clear. There is no previous recitation of a second electrode.

As to claims 61/56 and 61/58, line 2, "said second electrode" lacks antecedent basis.

As to claim 61, line 2, "said second electrode said second electrode" is redundant.

As to claims 63/56 and 63/58, lines 1-2, "said first electrode" and "said second electrode" lack antecedent basis.

As to claims 64/56 and 64/58, lines 1-2, "said first electrode" lacks antecedent basis.

As to claims 64/56 and 64/58, line 2, "said second electrode" lacks antecedent basis.

As to claims 66/56 and 66/58, lines 2-3, "said first electrode and second electrode" lack antecedent basis.

As to claim 67, line 15, "the main assembly" lacks antecedent basis.

As to claim 69, lines 2-3, "said developing device frame" lacks antecedent basis.

As to claim 74, line 3, "said developing device frame" lacks antecedent basis.

As to claim 77, line 18, "the main assembly" lacks antecedent basis.

As to claim 78, line 9, "the electrostatic latent image" lacks antecedent basis.

As to claim 78, lines 18-19, "said developing device" lacks antecedent basis.

As to claim 78, line 19, "the electric signal" lacks antecedent basis.

As to claim 78, lines 19-20, "said third electric contact" lacks antecedent basis.

As to claim 80, lines 2-3, "said developing device frame" lacks antecedent basis.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 12, 33, 56, and 58 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakagawa et al. (5,923,918).

Nakagawa et al. discloses an electrophotographic image forming apparatus with a process cartridge P1. The process cartridge has a photosensitive drum 2 and a developing means with a developing unit 5 and a toner receptacle 3 for supplying toner to the developing unit 5. A latent image is formed on the photosensitive drum 2 by a

laser beam projected onto the drum 2. The developing unit 5 has a developing sleeve 8 for developing a latent image formed on the photosensitive drum 2 and an antenna line 16 which reads on the instant invention's developer path electrode since it is disposed along a path along which the developer accommodated in the developing unit 5. An amount of toner is detected utilizing a change in the electrostatic capacitance between the antenna line 16 and the developer roller or sleeve 8 when applying voltages to both of them. Note column 4, lines 24-63 and column 7, lines 58-65.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1-3, 6-10, 11/1, 11/2, 11/6, 11/7, 21/1, 21/6, 22-24, 27-31, 32/22, 32/23, 32/27, 32/28, 42/22, 42/27, 43, 44, 45/43, 45/44, 46/43, 46/44, 55/43, 55/44, 67-69, 72-74, and 77-80 are rejected under 35 U.S.C. 102(a) as being anticipated by Karakama et al. (EP 1 016 939 A2).

Karakama et al. discloses a removably installable process cartridge B with a photosensitive drum 7, a developer storage frame 11 comprising a developing container, and a development unit 12 including a development roller 9a and a stirring member 9e. The process cartridge B is installed within a main assembly 14 of an electrophotographic image forming apparatus. As shown in Figs. 29 and 30, a first electrode 81 and a second electrode 82 is shown where the lower end of the second electrode 82 is lower than the first electrode 81. The two electrodes are disposed along

the development roller 9a. The developer amount detecting apparatus comprises the two electrodes 81, 82. Voltage is applied to the first electrode 81 or the second electrode 82 to induce static electricity between the two electrodes to that the amount of the developer is calculated from the measurement of the amount of the electrostatic capacity between the two electrodes. Note column 7, lines 7-51. A third electrode 83 is located between the second electrode and the development roller 9a. A second electrostatic capacity is measured between the third electrode and the development roller 9a. Note column 16, line 36 – column 17, line 30.

Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

Allowable Subject Matter

Claims 13, 14/13, 17/13, 18/13, 19/13, and 21/13 are allowed over the prior art of record.

Claims 4/1, 4/2, 5/1, 5/2, 14/12, 47/43, 48/43, 75/72, 75/73, 76/72, and 76/73 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 25/22, 25/23, 26/22, 26/23, 35/33, 38/33, 39/33, 40/33, 47/44, 48/44, 60/56, 60/58, 61/56, 61/58, 62/61/56, 62/61/58, 63/56, 63/58, 64/56, 64/58, 65/56, 65/58, 66/56, 66/58, 70/67, 70/68, 71/67, 71/68, 81/77, and 82/77 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth

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in this Office action and to include all of the limitations of the base claim and any intervening claims.

Claims 15, 16, 17/15, 17/16, 18/15, 18/16, 19/15, 19/16, 20/15, 20/16, 34-37, 38/34, 38/36, 38/37, 39/34, 39/36, 39/37, 40/34, 40/36, 40/37, 41/34, 41/36, 41/37, 42/34, 49, 50, 51/49, 51/50, 52/49, 52/50, 53/49, 53/50, 54/49, 54/50, 57, 59, 60/57, 60/59, 61/57, 61/59, 62/61/57, 62/61/59, 63/57, 63/59, 64/57, 64/59, 65/57, 65/59, 66/57, 66/59, 81/78, and 82/78 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Sasaki et al (Japan, 241), Matsumoto et al. (490), Sakai et al. (Japan, 477), Hishimoto (Japan, 821), Kawada (Japan, 118), Toyokichi et al. (Japan, 180), Yokoyama et al. (413), Suwa et al. (464), Matsumoto et al. (018), and Matsumoto et al. (193) disclose art in developing devices.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan S. Lee whose telephone number is 703-308-2138. The examiner can normally be reached on Mon. - Fri., 10:30-8:00, First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Art Grimley can be reached on 703-308-1373. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3432 for regular communications and 703-305-3432 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.



Susan S. Lee
Primary Examiner
Art Unit 2852

SL
June 15, 2002